LOGSA OIF DM: In-Process Review

18 Dec 03

U.S. Army Materiel Command

ESSENTIAL IN PEACE, INDISPENSABLE IN WAR

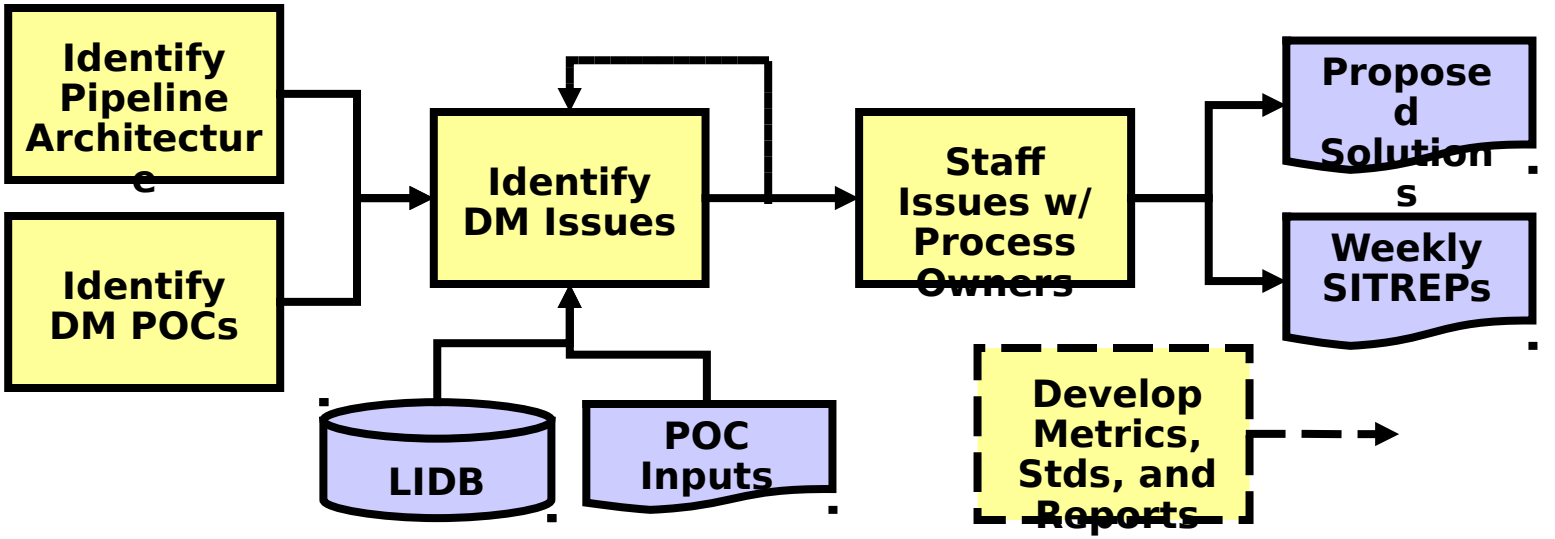
OIF DM Integrated Process Team Introduction

LOGSA Tasking:

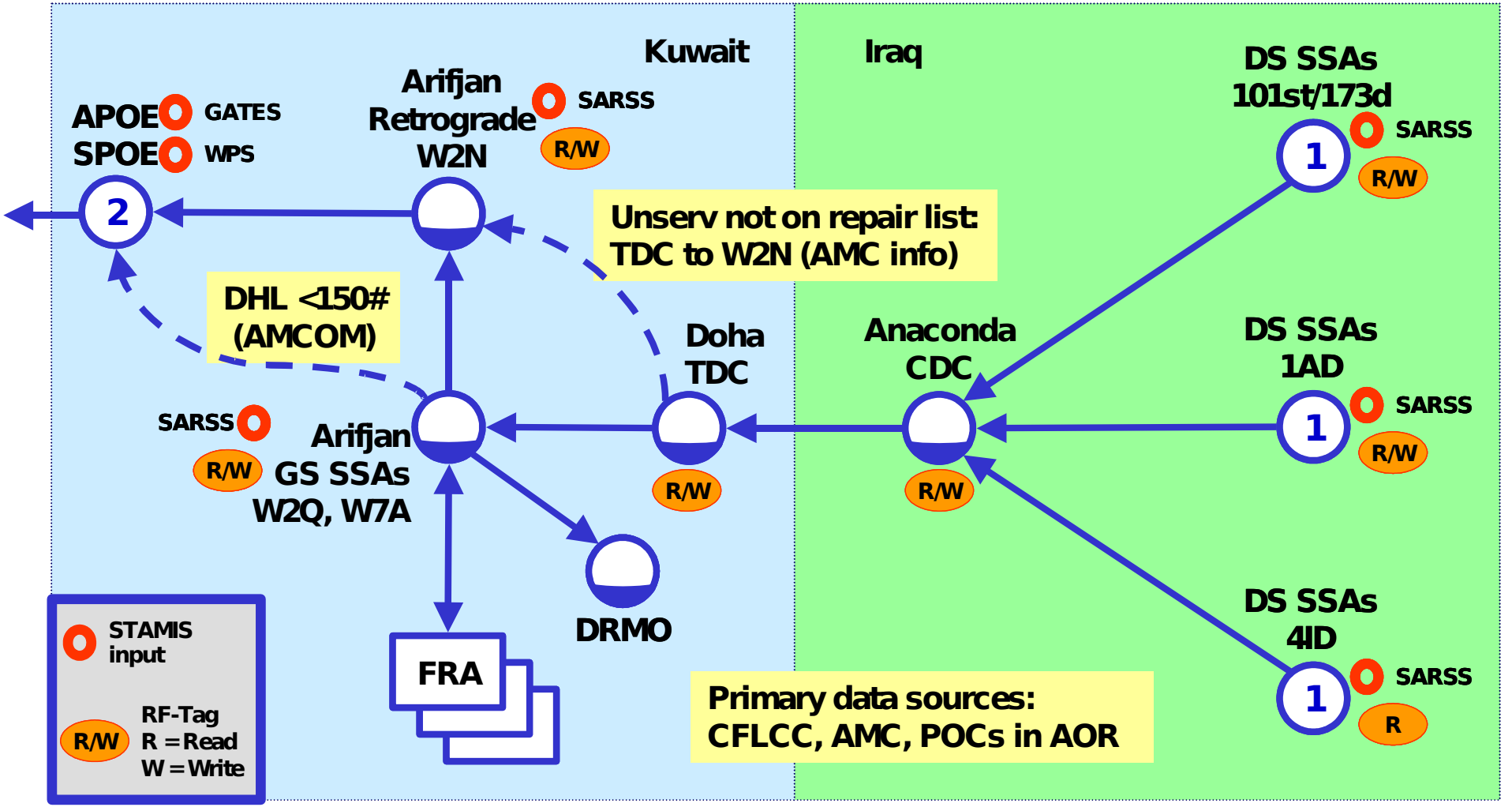
- **Develop Metrics, Standards, and Reports for Retrograde Operations**
- **Improve ITV in OIF Retrograde Pipeline**

Initial Focus of LOGSA DMIPT:

- **Identify Key Issues Related to ITV in Retrograde and Forward Pipelines**



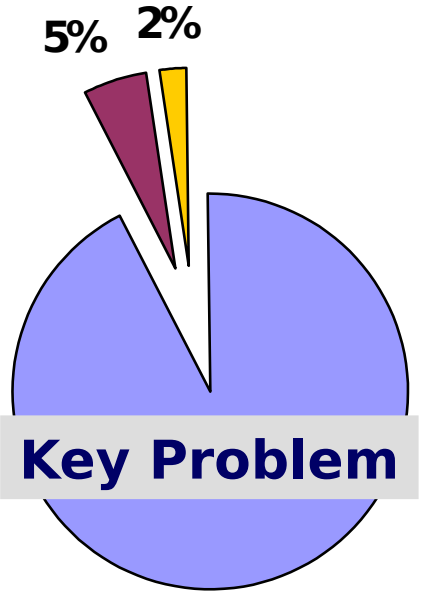
OIF Retrograde Pipeline Class IX



OIF Retrograde Pipeline
Magnitude of ITV Challenge

Bottom Line Up Front

- **Doc Number – TCN Relation Needed for ITV**
- **Most Retrograde TCNs Not Visible: Loss of ITV**



Sources:
321st MMC,
LOGSA

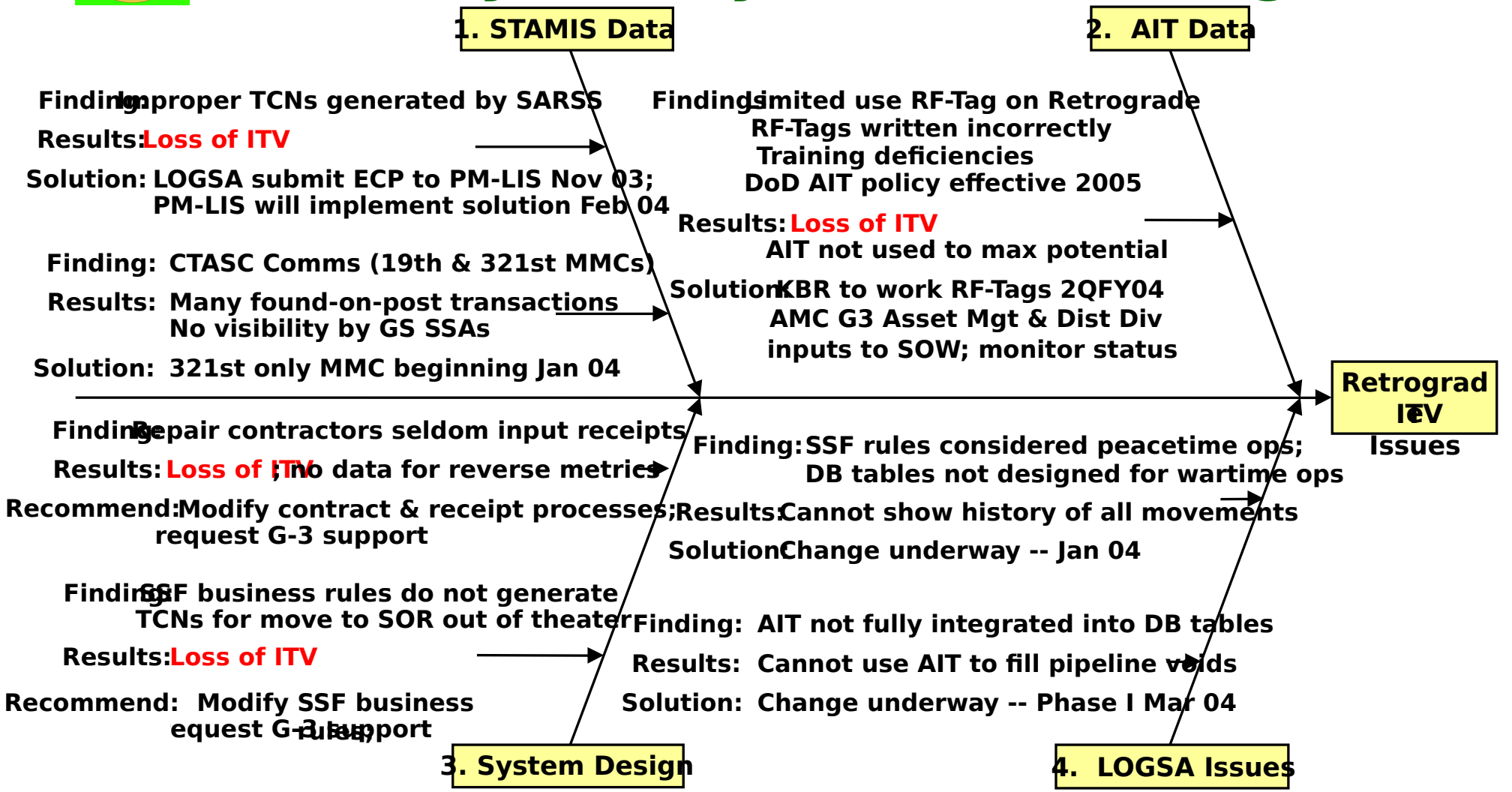
Retrograde from W2Q, W7A, W2N: 1-26 Nov 03

6324 Retrograde MROs Visible in CTASC (321st MMC)

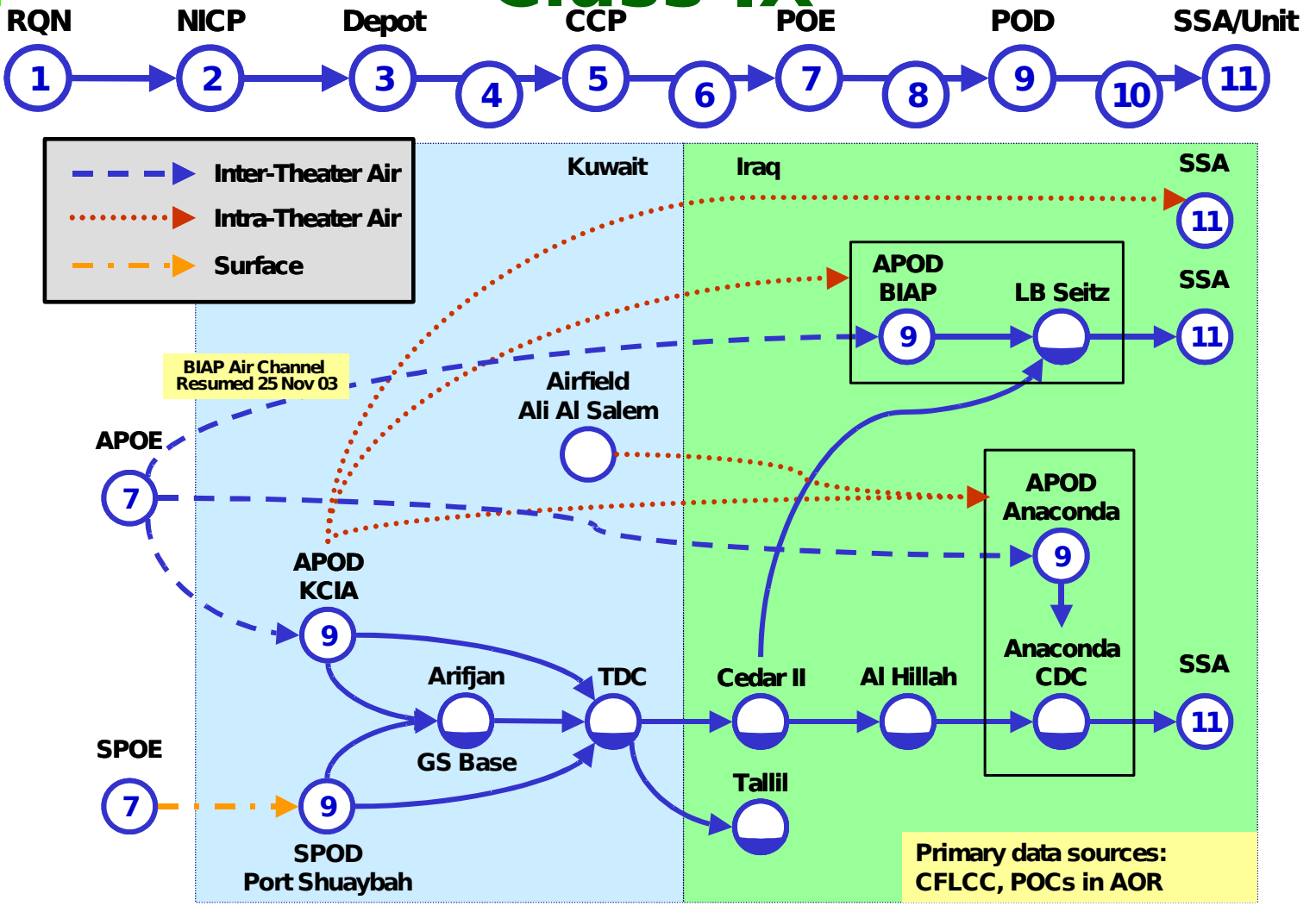
- **RX Items; Condition Code "F"**
- **7% MROs Have TCN Visible in CTASC**
  - **5% MROs w/ TCN Not Visible at National Level**
  - **2% MROs w/ TCN Visible at National**
  - **93% MROs w/o TCN Visible in CTASC**

Findings describe issues contributing ITV problem

OIF Retrograde Pipeline
Summary of Key Initial Findings


1. STAMIS Data
Finding: Improper TCNs generated by SARSS
Results: Loss of ITV
Solution: LOGSA submit ECP to PM-LIS Nov 03; PM-LIS will implement solution Feb 04
Finding: CTASC Comms (19th & 321st MMCs)
Results: Many found-on-post transactions
No visibility by GS SSAs
Solution: 321st only MMC beginning Jan 04
2. AIT Data
Findings: Limited use RF-Tag on Retrograde
RF-Tags written incorrectly
Training deficiencies
DoD AIT policy effective 2005
Results: Loss of ITV
AIT not used to max potential
Solution: KBR to work RF-Tags 2QFY04
AMC G3 Asset Mgt & Dist Div inputs to SOW; monitor status
Retrograde ITV Issues
Finding: Repair contractors seldom input receipts
Results: Loss of ITV; no data for reverse metrics
Recommend: Modify contract & receipt processes; request G-3 support
Finding: SSF business rules do not generate TCNs for move to SOR out of theater
Results: Loss of ITV
Recommend: Modify SSF business rules; request G-3 support
Finding: SSF rules considered peacetime ops; DB tables not designed for wartime ops
Results: Cannot show history of all movements
Solution: Change underway -- Jan 04
Finding: AIT not fully integrated into DB tables
Results: Cannot use AIT to fill pipeline voids
Solution: Change underway -- Phase I Mar 04
3. System Design
4. LOGSA Issues

OIF Forward Pipeline Class IX



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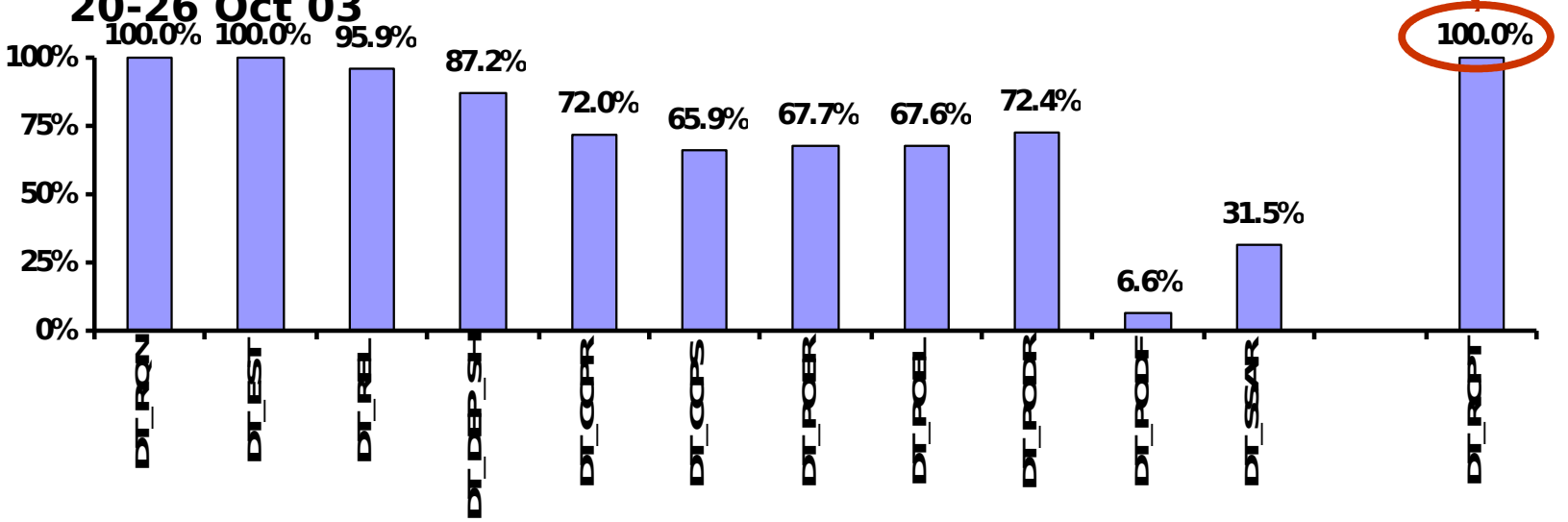
OIF Forward Pipeline Data Voids

Class IX Receipts in Iraq
20-26 Oct 03

Percentage of Receipts with valid STAMIS Transactions at each Pipeline Node



- **STAMIS Data Voids in Theater:**
- **POD Forward transaction (DT_PODF). USAF Air Mobility Command confirms no STAMIS transaction executed on Army cargo moved out of the APOD. LOGSA working with Air Mobility Command on PODF disconnect in GATES.**
- **SSA Receipt transaction (DT_SSAR). LOGSA investigating use of AIT information for TK6 closeout.**

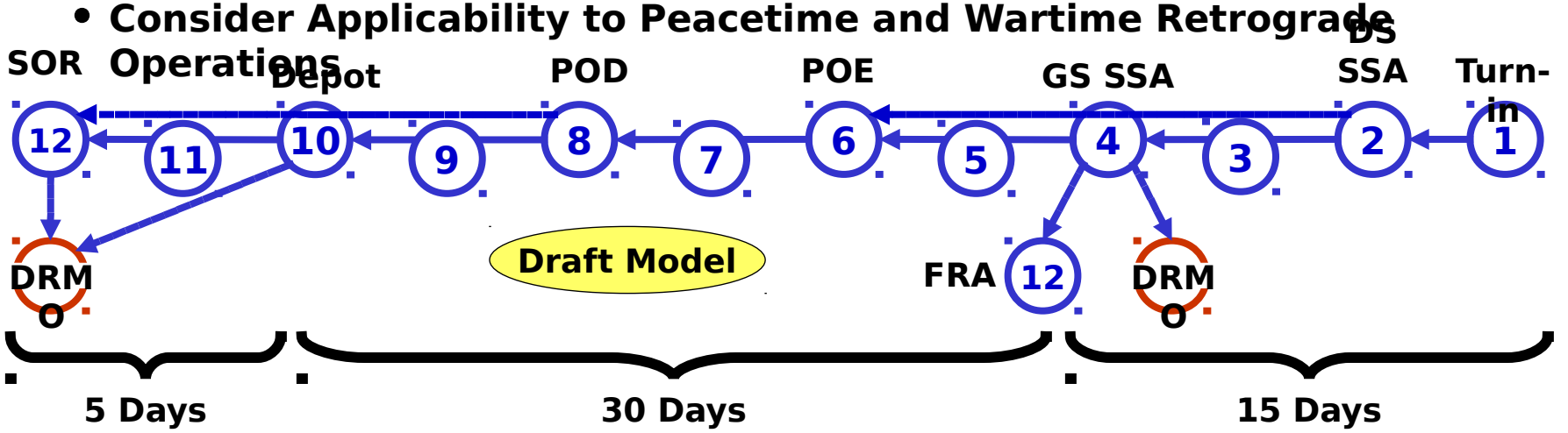
OIF DM In - Process Review Summary

1. **National-level ITV Hindered by Multiple Systemic Challenges:**
   - **No One Root Cause Identified – Use Continuous Improvement Approach**
   - **Concentrate on Solutions for OIF and Future Contingency Missions**
   - **Consider New Technologies or System Design Changes to Address Inherent Weaknesses in Current System**
2. **DM IPT Path Ahead:**
   - **Work Current Issues to Resolution; Continue to Identify new Issues**
   - **Develop Retrograde Metrics, Standards, and Reports**
     - **Doctrinal Retrograde Metrics and Standards (Coordinate w/ RAND)**
     - **Develop Reporting Tools for Retrograde Metrics**

OIF DM In - Process Review
Path Ahead: Draft Retrograde Metrics

Doctrinal Retrograde Metrics

- Define Nodal Metrics Similar to Forward Pipeline Metrics Described in AR 725-50
- Consider Applicability to Peacetime and Wartime Retrograde Operations



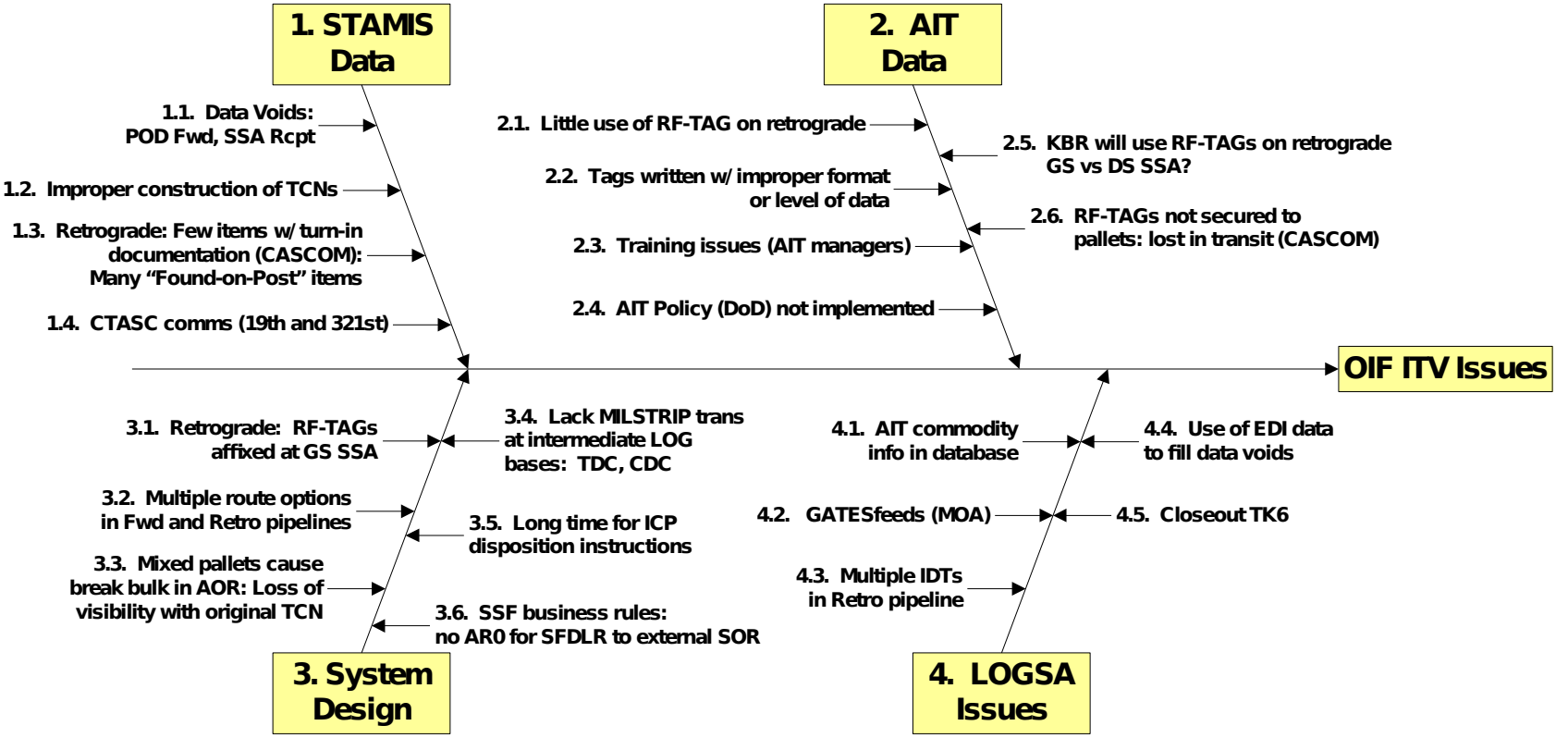
Other Metrics: Recovered Value of Retrograde Process

- Consider restored asset value of repaired item and salvage value
- Consider costs associated with transportation, repair, and processing (delay) time

Backup

Retrograde Movement & ITV
ITV Key Issues

LOGSA DMIPT investigating several issues related to ITV


1. STAMIS Data
2. AIT Data
1.1. Data Voids: POD Fwd, SSA Rcpt
1.2. Improper construction of TCNs
1.3. Retrograde: Few items w/ turn-in documentation (CASCOM): Many "Found-on-Post" items
1.4. CTASC comms (19th and 321st)
2.1. Little use of RF-TAG on retrograde
2.2. Tags written w/ improper format or level of data
2.3. Training issues (AIT managers)
2.4. AIT Policy (DoD) not implemented
2.5. KBR will use RF-TAGs on retrograde GS vs DS SSA?
2.6. RF-TAGs not secured to pallets: lost in transit (CASCOM)
OIF ITV Issues
3.1. Retrograde: RF-TAGs affixed at GS SSA
3.2. Multiple route options in Fwd and Retro pipelines
3.3. Mixed pallets cause break bulk in AOR: Loss of visibility with original TCN
3.4. Lack MILSTRIP trans at intermediate LOG bases: TDC, CDC
3.5. Long time for ICP disposition instructions
3.6. SSF business rules: no AR0 for SFDLR to external SOR
4.1. AIT commodity info in database
4.2. GATESfeeds (MOA)
4.3. Multiple IDTs in Retro pipeline
4.4. Use of EDI data to fill data voids
4.5. Closeout TK6
3. System Design
4. LOGSA Issues

OIF Retrograde Pipeline
Key Initial Findings

1. STAMIS Data

Finding: Numbers	**Improper construction of Transportation Control (TCNs) by SARSS for selected transactions**
Result:	**Loss of ITV**
Solution:	**LOGSA submitted ECP to PM-LIS on 19 Nov 03 PM-LIS performing impact study**
Finding: (19th MMC)	**CTASC communications: Turn-ins at DS SSAs not visible at GS SSAs (321st MMC)**
Result:	**Many found-on-post transactions at GS SSAs GS SSAs have no visibility of inbound retrograde materiel**
Solution:	**321st MMC to assume theater-wide mission in Jan 04**

OIF Retrograde Pipeline
Key Initial Findings

2. AIT Data

Findings: Little use of RF-Tags on retrograde – Iraq to Kuwait

RF-Tags often written in incorrect format or level of detail

OIF AIT managers report training deficiencies

DoD AIT Policy not in effect until 2005

Result: Loss of ITV

AIT not being used to fullest potential

Solution: KBR will write and assign RF-Tags to retrograde items beginning 2QFY04. Begin at GS SSAs.

AMC G-3 Asset Management and Distribution Division providing inputs to KBR contract SOW and tracking status.

OIF Retrograde Pipeline
Key Initial Findings

3. System Design

Finding: SSF business rules do not generate a shipment transaction for SFDLR shipments to repair facilities external to theater

Result: Loss of ITV

Recommendation: Modify SSF business rules to generate shipment with transaction for SSF lateral transfers. Issue staffed AMC G-3 Asset Management and Distribution Division.

Finding: Contractor maintenance facilities seldom provide receipt transaction of retrograde materiel

Result: Loss of ITV

Lack of data to compute retrograde metrics

Recommendation: Modify contract & receipt process so vendors can submit receipt transactions. Request G3 support for coordination.

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OIF Retrograde Pipeline
Key Initial Findings

4. LOGSA Issues

Finding: multiple scenario)	**Database tables not designed to accommodate inter-depot transfers of retrograde (contingency**
Result: history of	**Automated systems cannot provide complete retrograde movement for a given item**
Solution: Estimated	**#1 LOGSA priority for database change. completion in Jan 04.**
Finding: tables	**AIT information not integrated into database**
Result: voids in	**Automated systems cannot use AIT inputs to fill pipeline data**
Solution: I in Mar 04.	**Contract awarded for AIT data integration. Phase underway and on target -- estimated completion**

OIF Retrograde ITV
Recent Example of RF-Tag Problems

EXAMPLE 1: Written in IRAQ 30 Nov 03

Invalid TCN in the TCMD data, which carried forward to the Lead TCN on the License P
No Commodity Data
Free Text in the License Plate gives Nomenclature and Serial Number of Engine

EXAMPLE 2: Written in IRAQ on 10 Nov 03, Last sighting was 01 Dec 03 at Camp Arifjan

No TCMD data: missing the LEAD TCN, POE, POD, CONSIGNEE and CONSIGNOR data
No Commodity Data
No License plate data, this data is derived from the TCMD data
Never uploaded to the ITV Server correctly

EXAMPLE 3: Written in IRAQ on 22 Nov 03, Last sighting was 30 Nov 03 at Camp Arifjan

The TCMD data is incomplete, missing the POE, POD CONSIGNEE and CONSIGNOR
No Commodity Data
Free Text in the License Plate gives Nomenclature, NSN, Serial Number and status that this equipment is sustainable

EXAMPLE 4: Written in IRAQ on 15 Nov 03, Last sighting was 20 Nov 03 at Camp Arifjan

The TCMD data is incomplete, the LEAD TCN is constructed wrong, plus missing the POE, POD CONSIGNEE and CONSIGNOR
No Commodity Data
Free Text in the License Plate gives Nomenclature, NSN and Serial Number

OIF DM In - Process Review
Path Ahead: Retrograde Metrics

Retrograde Application for Customers

Overview

- Retrograde In-transit Visibility Report (RIVR) LOGSA product since 1981
- Upgraded from a "hardcopy" report in 2001
- Presently available as a GUI in LIDB

Metrics

- Total Number of Turn-ins
- Number/average time to DRMO
- Number/average time to COE (Source of Repair)
- Number/elapsed time open in-transit

Status

- RIVR not tailored for current wartime retrograde operations
- Revise product to address wartime operations and customer needs
- Utility dependent on quality of input data

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OIF DM In - Process Review
Path Ahead: Retrograde Metrics

Time Standards for the Retrograde Pipeline

- Consider Previous Standards (Goals) Proposed for the Retrograde Process
- Map These Standards to Current Retrograde Model

	Class	ICP Process	Customer Response	Shipping	ICP Resp Depot Rcpt	Depot Process	Total Time
CONUS	VII	15	25	15	2	3	60
CONUS	Other	10	15	7	2	3	37
CONUS	ARI		15	15	2	3	35
OCONUS	VII	15	25	45	2	3	90
OCONUS	Other	10	25	30	2	3	70
OCONUS	ARI		15	30	2	3	50

Class IX Pipeline Performance Metrics Kuwait: 1 Dec – 7 Dec 03

UMMIPS Std: NMCS P[illegible] (Mod 3/3A); Hard Lift Areas

1 Day	1.5 Day	1 Day	1 Day	1 Day	1 Day	1 Day	3 Days	1 Day	1 Day	0.5 Day	→ 13 Days

Traditional Pipeline Metrics:
Mean Processing Times for Requisitions Received this Period by SSAs/Units in AOR

2.5 Days	2.4 Days	7.8 Days	1.8 Days	3.8 Days	1.0 Days	1.7 Days	1.8 Days	Trace Data	Trace Data	Trace Data	→ 36.4 Days

RQ → NICP → Depot → CCP → PO → POD → SSA/Uni → CWT

1 → 2 → 3 → 4 → 5 → 6 → 7 → 8 → 9 → 10 → 11 → CWT

	Mean CWT	Receipts
Non Backorders	36.4 Days	8,736
Backorders & DVD	79.5 Days	2,149

Highlights on Pipeline Performance: Kuwait

- Removed suspect receipts from units W55XGJ, W81TPR, W91RWM, & W91S2E (very long mean CWT).
- Trace data for nodes in theater is recurring problem.

Comparison of Pipeline Performance

1. Iraq = 1.8 Days; Kuwait = 2.5 Days
4. Iraq = 3.6 Days; Kuwait = 1.8 Days
6. Iraq = 2.3 Days; Kuwait = 1.0 Days
8. Iraq = 2.3 Days; Kuwait = 1.8 Days
CWT. Iraq = 35.6 Days; Kuwait = 36.4 Days

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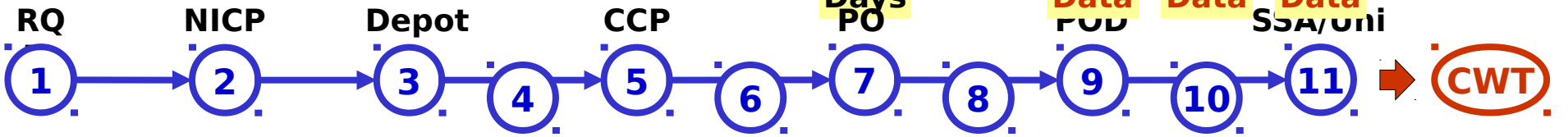
Class IX Pipeline Performance Metrics Iraq: 1 Dec – 7 Dec 03

UMMIPS Std: NMCS PD 01-08 (RDD 999): Hard Lift Areas

1 Day	1.5 Day	1 Day	1 Day	1 Day	1 Day	1 Day	3 Days	1 Day	1 Day	0.5 Day	13 Days

Traditional Pipeline Metrics:
Mean Processing Times for Requisitions Received this Period by SSAs/Units in AOR

1.8 Days	2.3 Days	7.6 Days	3.6 Days	3.6 Days	2.3 Days	1.8 Days	2.3 Days	Trace Data	Trace Data	Trace Data	35.6 Days



	Mean CWT	Receipts
Non Backorders	35.6 Days	48,778
Backorders & DVD	58.9 Days	13,691

Highlights on Pipeline Performance: Kuwait

- Trace data for nodes in theater is recurring problem.
- Long mean times for Nodes 3 – 5 is recurring problem. UMMIPS standard for depot (Node 3) is 4 days. Nodes 4 – 6 require 3 days.

Comparison of Pipeline Performance

1. Iraq = 1.8 Days; Kuwait = 2.5 Days
4. Iraq = 3.6 Days; Kuwait = 1.8 Days
6. Iraq = 2.3 Days; Kuwait = 1.0 Days
8. Iraq = 2.3 Days; Kuwait = 1.8 Days
CWT. Iraq = 35.6 Days; Kuwait = 36.4 Days

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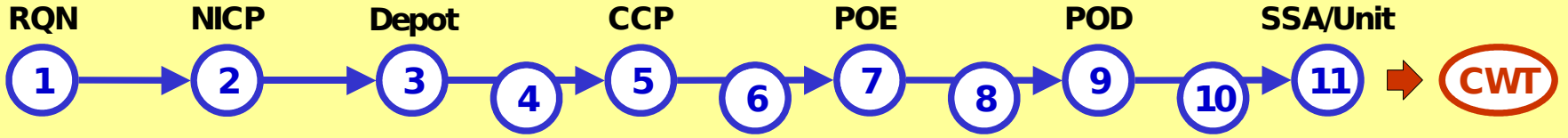
Pipeline Performance Metrics
Analysis of Depot Processing Times

Top 10 Depot-Level RICs by Depot Volume
Receipts in Iraq: 1 Dec – 7 Dec 03
All Classes – IPG 1 Requisitions Only

RIC	Depot-Level Activity	Number Rqns Processed	Process Time Mean Days	Percent of Receipts
SNC	Susquehanna (Const)	13,127	10.43	27.56%
SNI	Susquehanna (Indust)	11,748	6.32	24.67%
AQ5	DLA San Joaquin, CA	6,746	6.75	14.16%
SNG	Susquehanna (Gen)	3,720	8.98	7.81%
W7A	Camp Arifjan KU	2,708	6.40	5.69%
SNE	Susquehanna (Electr)	2,151	6.84	4.52%
AN5	New Cumberland, PA	1,415	12.82	2.97%
BR4	Red River Army Depot, TX	907	3.96	1.90%
SRG	Richmond, VA	749	4.34	1.57%
SEP	DLA Memphis	712	2.50	1.49%

For all IPG 1 requisitions receipted in Iraq during the given period, this chart shows the number of those requisitions processed by the given depot-level activities and mean processing time for the activities.

Definitions of Forward Pipeline



1	Requisition Process	=	Date Established (A0) – Document Number Date
2	NICP Processing	=	Date MRO Released (A5) – Date Established
3	Depot Processing	=	Date Depot Shipped (AR0, AS_) – Date MRO Released
4	Intrans to CCP	=	Date CCP Receipt (TAW, TAV) – Date Depot Shipped
5	CCP Processing	=	Date CCP Shipped (TAW; TAV) – Date CCP Receipt
6	Intrans to POE	=	Date POE Receipt (Surface: TAG; Air: T_A, T_B, T_D) – Date CCP Shipped
7	POE Processing	=	Date POE Lift (Surface: TAG; Air: T_A, T_B, T_D) – Date POE Receipt
8	Intrans to POD	=	Date POD Receipt (Surface: TTU; Air: TK6) – Date POE Lift
9	POD Processing	=	Date POD Forward (Surface: TTU; Air: TK6) – Date POD Receipt
10	Intrans to SSA	=	Date SSA Receipt (Surface: TK9; Air: TK6) – Date POD Forward
11	SSA Processing	=	MIRP Date (DRA, D6S; Single Stock Fund: D6K) – Date SSA Receipt
CWT	Customer Wait Time	=	MIRP Date – Document Number Date

(xxx) = Document Identifier

Industry Best Practices
Initial Findings

Telephone interviews with FedEx, DHL, John Deere

1. Use of Bar Codes

- Key to ITV
- Scan performed whenever a parcel enters or exits a node
- Analogous to our STAMIS transaction
- Consolidations done similar to our use of Consolidated TCNs
- All parcels scanned when consolidations broken

2. Use of RF technology

- All considering use of RFID
- Cost is major consideration or obstacle

Industry Best Practices
Initial Findings

3. Retrograde operations at John Deere

- **Provide major assemblies for remanufacturing**
- **Problem with return of unserviceable assemblies**
- **Use of financial incentive to promote return of unserviceables**

4. FedEx Service Quality Index (SQI)

- **Metric to measure the quality of operations**
- **Demerits are awarded for various shortcomings**
- **List of shortcomings is very customer focused**
- **SQI is sum of demerit scores; Goals set for SQI**

Site visits being coordinated with John Deere & Target Corp